

CLAIMS:

1. A packaged, treat-size, mammal pet food product, including:
 - a manufactured food substrate; and
 - 5 • a combination of functional additives, of which at least one is a non-palatable plant extract and/or dietary fibre source that are present to strengthen and/or maintain a specified health indicator of a mammal pet animal, wherein the food product is portioned and packaged with at least one functional additive being present in a pre-determined concentration and
 - 10 amount sufficient to be effective in achieving said indicator on regular feeding of the pet animal with said food product, and wherein said food substrate is present in a proportion sufficient to mask the flavour and/or odor non-palatable additives.
- 15 2. A packaged pet food product according to claim 1, wherein the functional additives include L-glutamine, D-glucosamine sulphate, sugar beet pulp, slippery elm and as an optional additive inulin, said functional additives being present in amounts sufficient to promote or maintain gastro-intestinal health when the pet food product is ingested by a pet animal on a regular,
- 20 preferably daily basis.
3. A packaged pet food product according to claim 2, wherein the functional additives are provided in the following amounts, by weight of finished product, the balance being made-up by the manufactured food
- 25 substrate and other nutritional supplements:
 - L-glutamine – from about 3 to about 5%;
 - D-glucosamine sulphate – from about 3 to about 5%;
 - sugar beet pulp – from about 4 to about 8%;
 - inulin, if present – from about 3.0 to about 4.5%; and
 - 30 • slippery elm – from about 1.5 to about 2.5%.

4. A packaged pet food product according to claim 3, wherein the functional additives are provided in the following amounts: L-glutamine – about 4%, D-glucosamine sulphate – about 4%, sugar beet pulp – about 6, slippery elm – about 2%.

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5. A packaged pet food product according to claim 1, wherein the functional additives include a combination of vitamin E, vitamin B complex, evening primrose oil, vitamin C and marigold meal, said functional additives being present in amounts sufficient to strengthen or maintain a pet animal's natural body defences (immune system function) when the pet food product is provided to the pet animal on a regular, preferably daily basis.

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6. A packaged pet food product according to claim 5, wherein the functional additives are provided in the following amounts, by weight of finished product, the balance being made up by the manufactured food substrate and other nutritional supplements;

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- vitamin E – about 1.0 to about 2.5%;
- vitamin B complex – about 0.10 to about 0.25%;
- evening primrose oil – about 0.7 to about 2.5%;
- vitamin C – about 0.5 to about 3.0%;
- marigold meal – about 0.4 to about 0.8%.

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7. A packaged pet food product according to 6, wherein the functional additives are provided in the following amounts: vitamin E – about 2%, vitamin B complex – about 0.2%, evening primrose oil – about 0.8%, vitamin C – about 2.5% and marigold meal – about 0.6.

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8. A packaged pet food product according to claim 1, wherein the functional additives include Valerian root extract, Kava root extract, vitamin B complex and a magnesium salt, said functional additives being present in amounts sufficient to promote or calmness and/or improved behaviour of a pet

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animal when the pet food product is provided to the pet animal on a regular, preferably daily basis.

9. A packaged pet food product according to claim 8, wherein in addition
5 to or in partial substitution for Valerian root extract and/or Kava root extract, Ginkgo Bilboa extract and St John's Wort extract is present in physiological relevant amounts.

10. A packaged pet food product according to claim 8 ; wherein the
10 functional ingredients are provided in the following amounts, by weight of finished product, the balance being made-up by the manufactured food substrate and other nutritional supplements;

- Valerian root extract – from about 0.3 to about 1.0%;
- Kava root extract – from about 0.3 to about 3%;
- 15 • if present, Ginkgo Biloba extract – from about 0.1 to about 1.0%;
- if present, St John's Wort extract – from about 0.1 to about 1.0%;
- vitamin B complex – from about 0.5 to about 3.0%; and
- magnesium salt – from about 0.5 to about 2.5%.

20 11. A packaged pet food product according to claim 10, wherein the functional additives are provided in the following amounts:

- Valerian root extract –about 0.4%;
- Kava root extract – about 2%;
- vitamin B complex –about 2.5%;
- 25 • magnesium sulphate–about 1.8%.

12. A packaged pet food product claim 1, wherein the functional additives
include two or more additives selected from the group consisting of Yucca
extract, vegetable charcoal and salts of zinc acetate, said functional additives
30 being present in amounts sufficient to reduce flatulence odour when the pet food product is provided to a pet animal on a regular, preferably daily basis.

13. A packaged pet food product according to claim 12, wherein the functional additives are provided in the following amounts, by weight of finished product, the balance being made-up by the manufactured food substrate and other nutritional supplements:

- 5 • Yucca Shidigera or Elata extract – from about 0.05 to about 0.11%, preferably 0.06%;
- Vegetable charcoal – from about 6 to about 14%, preferably 6%; and
- zinc acetate – from about 0.3 to about 0.8%, preferably 0.4%.

10 14. A packaged pet food product according to claim 3, wherein the food substrate includes dry ingredients comprising animal protein, carbohydrates and an anti-microbial agent, and at least one liquid ingredient in a predetermined ratio to the sum of the dry ingredients.

15 15. A packaged pet food product according to claim 4 wherein the food substrate includes dry ingredients comprising animal protein, carbohydrates and an anti-microbial agent, and at least one liquid ingredient in a predetermined ratio to the sum of the dry ingredients

20 16. A packaged pet food product according to claim 14 wherein the animal protein constitutes from about 17% to 50% by weight of the dry ingredients.

25 17. A packaged pet food product according to claim 16, wherein the animal protein is derived from beef, pork, mutton, poultry, fish or a combination of these.

18. A packaged pet food product according to claim 17, wherein the animal protein includes gelatins.

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19. A packaged pet food product according to claim 14, wherein the carbohydrates include simple and complex carbohydrates.

19. A packaged pet food product according to claim 14, wherein the carbohydrates include simple and complex carbohydrates. wherein the complex carbohydrates include rice flour, and wherein the simple carbohydrates include glucose, glycerol and/or sugar.

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20. A packaged pet food product claim 14, , wherein the antioxidant is rosemary extract.

21. A packaged pet food product according to claim 14. wherein the
10 water constitutes about 10 to about 20% by weight of the finished product.

22. A packaged pet food product in accordance with claim 16, in the form of a palatable, 'treat'-sized, chewy tablet, including the following ingredients in proportions by weight of finished product:

- 15
- gelatine – from about 3 to about 7%;
 - glucose – from about 2 to about 5%;
 - sugar – from about 2 to about 5%;
 - glycerol – from about 1 to about 4%;
 - potassium sorbate – from about 0.2 to about 0.5%;

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 - rosemary extract – from about 0.01 to about 0.05%,
 - water – from about 10 to about 20%; and
 - the balance being composed of pulverised meat (approx 50%), cereal flour (approx 11%), sugar (approx 8%), glycerine (approx 9%), citric acid (approx 1%) and preservatives (approx 0.1%).

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23. A packaged pet food product according to claim 22, wherein the product is provided in the form of a biscuit or multi-piece biscuit that is easily divisible so as to facilitate administration to a pet animal of a desired amount of the product corresponding with a desired dosage of the functional additives.

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24. A packaged pet food product according to claim 22, wherein the product is provided in the form of a food bar, having substantially uniform

concentration of the functional additives throughout the length thereof, and wherein the food bar includes markings, etchings or the like for indicating where the food bar may be broken so as to provide the pet animal with a desired dosage of the functional additives.

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25. A process for manufacturing a palatable, treat-sized pet food product according to claim 14 or 15, including the steps of:

- mixing dry ingredients including animal protein, carbohydrates and an antimicrobial agent;
- 10 • heating the dry ingredient mixture to between 50 to 80°C, preferably about 60°C, for about 5 to 15 minutes, preferably about 10 minutes;
- adding the functional additives to the dry ingredient mixture;
- mixing the resultant mixture for about 5 minutes;
- heating, in a separate container liquid ingredients, including water and
- 15 an antioxidant, to between 60 to 85°C, preferably about 75°C;
- adding the heated liquid ingredients to the resultant mixture to obtain a moistened mixture;
- heating the moistened mixture to between 60 to 80°C, preferably about 75°C, for about 5 minutes to obtain a processed mixture;
- 20 • substantially immediately after the heating step subjecting the processed mixture to a cooling step to achieve product temperature of between 40 to 60°C, preferably about 50°C; and moulding the cooled mixture by impression moulding or cutting techniques so as to form a packagable product of predetermined size, shape and weight.

26. The process of claim 25, further including the step of making markings, etchings or the like on the packagable product so as to enable the product in use, to be easily broken into pieces of a particular size.